

National University of Ireland, Galway  
Ollscoil na hEireann, Gaillimh

SEMESTER ONE EXAMINATIONS 2003/4

## PHILOSOPHY

### THIRD ARTS EXAMINATION

Professor B. Starr  
Professor M.H. Woerner

Time: 2 hours

#### PI332      **Astronomy in the History of Ideas**

Answer two questions.

1. In what sense can archaeoastronomy say anything conclusive about Stonehenge as an ancient observatory? Discuss.
2. Anaximander is one of the earliest Greek philosophers. Why did ancient sources (and current research) regard him as revolutionary in astronomy or cosmogony? Discuss.
3. How does a Theory of Homocentric Spheres (Plato/Aristotle) explain:
  - i. the apparent daily motion of the "fixed" stars
  - ii. the apparent annual motion of the sun through the Zodiac
  - iii. retrograde motions of the planets
  - iv. motions of the moon.

What is it not able to explain?

4. In the Timaeus, Plato calls Time "the living image of eternity". Explain and discuss.

5. How does Ptolemy's Geocentric model of celestial motion explain:
- the apparent daily motion of the "fixed" stars
  - the apparent annual motion of the Sun through the Zodiac
  - retrograde motions of the planets
  - motions of the moon?
6. How does Copernicus' Heliocentric Model of celestial motion explain:
- the apparent daily motion of the fixed stars
  - the apparent annual motion of the Sun through the Zodiac
  - retrograde motions of the planets
  - motions of the moon?

OR

Write an extended essay on the impact of Copernicus' "De revolutionibus" on Renaissance views of creation.

7. Discuss the relevance of Kepler's Laws for the "New Astronomy".
8. What are Galileo's contributions to astronomy?

OR

Write a critical essay on Galileo's trial and condemnation.

9. Explain and discuss basic propositions of Newton's model of the cosmos.
10. Write an essay on Astronomy in 19<sup>th</sup> century Birr Castle (Offaly).